Patent Claims

1. A header for a refrigerant of an air conditioning system, with a housing which has at least one inlet and at least one outlet orifice for the refrigerant, with a chamber for receiving the refrigerant and with at least one refrigerant-permeable separation element which separates a first and a second region of the chamber from one another, characterized in that an inner wall of the housing has one or more, in particular continuous or singly or multiply interrupted projections or depressions for supporting the separation element.

2. The header as claimed in claim 1, characterized in that the first region forms a return-flow chamber communicating with the inlet orifice and the second region forms a forward-flow chamber communicating with the outlet orifice, and in that the separation element has a filter or is designed as a filter.

3. The header as claimed in claim 2, characterized in that the filter comprises a filter fabric which has a reinforced edge region and/or is set in a frame connectable to the housing.

4. The header as claimed in claim 1, characterized in that a drier taking the form, in particular, of granulate or powder can be received in the first region.

5. The header as claimed in claim 4, characterized in that the separation element has a sieve or is designed as a sieve.

6. The header as claimed in claim 5, characterized in that the sieve has a reinforced edge region and/or is set in a frame connectable to the housing.

7. The header as claimed in one of claims 4 to 6, characterized in that the drier can be fixed in the first region by means of a force accumulator and, in particular, a force distributor.

8. The header as claimed in one of the preceding claims, characterized in that a depression for supporting the separation element is formed by a joint between two housing parts.

9. The header as claimed in one of the preceding claims, characterized in that the separation element can be supported against movement away from the first region.

10. The header as claimed in one of the preceding claims, characterized in that the separation element can be supported against movement toward the first region.

11. The header as claimed in one of the preceding claims, characterized in that the separation element can be supported by means of a force accumulator, the force accumulator being designed, in particular, as a compression spring or cup spring or as a securing ring.

12. The header as claimed in one of the preceding claims, characterized in that the separation element can be connected in a materially integral manner, in particular soldered, to the housing.

13. The header as claimed in one of the preceding claims, characterized in that the housing is designed as a closed tube, in particular round tube, with at least one inlet orifice and at least one outlet orifice.

14. A heat exchanger, in particular condenser, with tubes, ribs and two head pieces, characterized in that the heat exchanger has a header as claimed in one of claims 1 to 13.

15. A refrigerant circuit of an air conditioning system, in particular for a motor vehicle, with a compression element, with a first heat exchanger, with an expansion element, with a second heat exchanger and with a header, characterized in that the header is designed as claimed in one of claims 1 to 13.

16. A method for the production of a header for a refrigerant of an air conditioning system, in particular as claimed in one of claims 1 to 13, characterized

- in that, first, one or more projections are introduced into a housing inner wall of the header,
- in that a separation element is then laid onto the supporting means,
- in that, subsequently, a drier is introduced and is covered, in particular, by means of a force distributor, in particular a moveable pressure plate,
- in that a force accumulator, in particular a compression spring, is positioned on the drier or the force distributor,
- in that, in particular, a second separation element or a housing wall is positioned on the force accumulator,
- in that the force accumulator, the second separation element or the housing wall is pressed down in the housing from outside and the force accumulator is prestressed,
- in that one or more further projections are introduced into the housing inner wall above the force accumulator, the second partition or the

housing wall, and

- in that the force accumulator is relieved from outside, and the force accumulator presses against the further projections or the second partition or the housing wall is pressed against the further supporting means by the force accumulator.

17. A method for the production of a header for a refrigerant of an air conditioning system, in particular as claimed in one of claims 1 to 13, characterized

- in that a drier is introduced into a housing and is covered, in particular, by means of a force distributor, in particular a moveable pressure plate,
- in that a force accumulator, in particular a compression spring, is positioned on the drier or the force distributor, and a separation element is positioned on said compression spring,
- in that the separation element is pressed down in the housing from outside and the force accumulator is prestressed,
- in that one or more projections are introduced into a housing inner wall of the header above the separation element,
- in that the separation element is relieved from outside and is pressed against the projections by the force accumulator, and
- in that the housing is closed.

18. A method for the production of a header for a refrigerant of an air conditioning system, in particular as claimed in one of claims 1 to 13, characterized

- in that a drier is introduced into a housing and is covered by means of a separation element designed, in particular, as a force distributor, in particular a moveable pressure plate,

- in that a force accumulator, in particular a compression spring, is positioned on the separation element,
- in that the force accumulator is pressed down in the housing from outside and is prestressed,
- in that one or more projections are introduced into a housing inner wall of the header above the force accumulator,
- in that the force accumulator is relieved from outside and is pressed against the projections, and
- in that the housing is closed.

19. A method for the production of a header for a refrigerant of an air conditioning system, in particular as claimed in one of claims 1 to 13, characterized

- in that a drier is introduced into a housing and is covered by means of a separation element,
- in that the separation element is pressed down in the housing from outside,
- in that one or more projections are introduced into a housing inner wall of the header above or level with the separation element,
- in that the separation element is relieved from outside and is supported by the projections, and
- in that the housing is closed.

20. A soldered refrigerant condenser, in particular as claimed in one of the preceding claims, consisting of a heat exchanger network with flat tubes and corrugated ribs, of header tubes which are connected fluidically to the flat tubes and of a header which is arranged parallel to one of the header tubes and which preferably receives within it a drier and/or filter and is connected fluidically to the header tube via overflow orifices, the drier being designed as a space which receives a drying agent and which is delimited by

a portion of the header and by two refrigerant-permeable inserts which pass through the cross section of the header and which are supported on at least one or more projections of the header.

21. The condenser as claimed in one of the preceding claims, characterized in that the projection or the projections is or are designed as a continuous bead or at least individual distributed projections.

22. The condenser as claimed in one of the preceding claims, characterized in that the projection or the projections is or are designed as bead segments distributed over the circumference of the header.

23. The condenser as claimed in one of the preceding claims, characterized in that, between the inserts, an elastic element, such as, for example, a compression spring, is arranged, which is supported, on the one hand, against the upper insert and, on the other hand, against a moveable pressure plate which lies on the drier granulate and which presses the latter against the lower insert.

24. The condenser as claimed in one of the preceding claims, characterized in that the lower insert is designed as a perforated plate with a laid-on or integrated sieve or sieve fabric.

25. The condenser as claimed in one of the preceding claims, characterized in that the perforated plate is soldered circumferentially to the header.

26. The condenser as claimed in one of the preceding claims, characterized in that the filter is arranged in the lower region of the header between the two overflow orifices and is designed as an annular sieve.

27. The condenser as claimed in one of the preceding claims, characterized in that the annular sieve consists of an outer ring and of a framed planar sieve fabric.

28. The condenser as claimed in one of the preceding claims, characterized in that the ring is inserted into a groove in the header.

29. The condenser as claimed in one of the preceding claims, characterized in that the ring is connected to the header by frictional connection.

30. The condenser as claimed in one of the preceding claims, characterized in that the ring is soldered circumferentially to the header.

31. A method for the production of a condenser as claimed in one of the preceding claims, characterized

- in that, first, the projections in the lower region of the header are produced,
- in that the first insert is then laid onto the lower projections,
- in that, subsequently, granulate is introduced and covered upwardly by means of the moveable pressure plate,
- in that the compression spring is positioned on the pressure plate and the second insert is positioned above it,
- in that the second insert is pressed down in the header from outside and the compression spring is prestressed,
- in that projections are introduced into the header above the second insert, and
- in that the second insert is relieved from outside and is pressed against the projections by the compression spring.